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DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 19, 1990

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Jesse Kelley, Reclamation Engineer JK

RE: **Reclamation Cost Estimate, Cyprus-Plateau Mining Corporation, Starpoint Mine, ACT/007/006, Folder #4, Carbon County, Utah**

Synopsis of Proposal

On March 21, 1990, Ben Grimes of Cyprus-Plateau Mining Corporation sent to the Division a reclamation cost estimate for the Starpoint Mine.

Analysis

The cost estimate was checked for consistency and accuracy. It was found that an erroneous figure had been used in calculating the cost of operating a Catepillar 235 hydraulic excavator. The incorrect figure was $90.00 per hour. The actual cost was $104.34 per hour. When the correct figure was used, the total reclamation cost estimate came to $4,826,000.00; $17,000.00 more than the previous estimate of $4,809,000.00. Ben Grimes was notified by telephone of this discrepancy on March 26, 1990.

djh
Attachment
AT60/1

an equal opportunity employer

ACT/007/006

File No. 4

EXHIBIT 36

UNIT COSTS SUMMARY

I. LABOR AND SUPERVISION COSTS (MEANS SITE WORK COST DATA - 1989)

CONTRACT OVERHEAD AND PROFIT
OVERHEAD - 10% OF CONTRACT ESTIMATE
PROFIT - 10% OF CONTRACT ESTIMATE

II. EQUIPMENT COSTS INCLUDING OPERATOR (BLUE BOOK AND MEANS)

EQUIPMENT	MONTHLY RATE*	ADJ. RATE PER HOUR	MAINTENANCE PER HOUR	OPERATOR PER HOUR	TOTAL PER HOUR
CAT D9 DOZER	$12,540.00	$71.25	$32.10	$32.15	$135.50 ✓
CAT D8 DOZER	$11,265.00	$64.01	$28.95	$32.15	$125.11 ✓
CAT 631E 20YD SCRAPER	$17,445.00	$99.12	$51.65	$32.15	$183.22 × 182.92
CASE 580K TRACTOR	$2,055.00	$11.68	$5.95	$32.15	$49.78 ✓
CAT 14G GRADER	$7,055.00	$40.09	$16.25	$32.15	$88.49 ✓
DEERE 410C TRACTOR	$2,400.00	$13.64	$7.25	$32.15	$53.04 ✓
CAT 235 HYDRAULIC EXCAVATOR	$10,535.00	$47.89	$24.30	$32.15	$90.00 ✓ 104.34
EIMCO 915 LHD	$5,715.00	$32.47	$21.15	$32.15	$85.77 ✓

* MONTHLY RATES USED ON ALL EQUIPMINT DUE TO SIZE OF RECLAMATION PROJECT

III. DEMOLITION AND REMOVAL COSTS (MEANS WORK COST DATA - 1989)

JOB	LABEL	COST /UNIT
MIXED STEEL/CONC/WOOD	MIX	$0.17 /FT3
CONCRETE	CONC	$0.22 /FT3
STEEL	STEEL	$0.16 /FT3
PAVEMENT	ASPHALT	$1.45 /FT2
POWER LINES	WOOD/WIRE	$3.62 /LF
CHAIN LINK FENCE	FENCING	$1.22 /LF

IV. MISCELLANEOUS RECLAMATION COSTS

ITEM	LABEL	COST /UNIT
SEED MIX	SEED	$285.95 /ACRE
FERTILIZER	FERTILIZER	$0.11 /POUND
SEEDING - HYDROSEEDING	HYDROSEED	$927.36 /ACRE
DRILL SEEDING	TRACTOR & DRILL	$57.00 /HOUR
HAND SEEDING	HAND SEEDING	$1,378.20 /ACRE
SEEDLINGS	SEEDLINGS	$1.50 /EACH
MULCHING INCLUDES TACK & SPRAYING	MULCH	$1,200.00 /ACRE
FILTER BLANKET MATERIAL	GRAVEL	$25.00 /YD3
SILT FENCE - INSTALLED	SILT FENCE	$2.84 /LF
STRAW BALES - INSTALLED	STRAW	$3.50 /EACH

TABLE 69
BOND CALCULATION SUMMARY

DESCRIPTION	ACRES	AMOUNT	
AREA 1 - LOWER OPERATIONS	125.00	$1,051,961.29	(1,051,553.57)
AREA 2 - NO. 1 MINE	4.80	$132,773.76	(134,976.68)
AREA 3 - NO. 2 MINE	2.60	$19,889.42	(20,261.28)
AREA 4 - LION PORTAL	11.30	$121,046.72	(123,891.88)
AREA 5 - MUDWATER CANYON FAN	1.70	$54,729.98	
AREA 6 - CORNER CANYON FAN	0.40	$22,415.19	
AREA 7 - COUNTY ROAD		$25,610.76	
AREA 8 - ROAD TO NO. 1 MINE	2.50	$22,409.26	(20,079.07)
AREA 9 - FINAL CHANNEL RECLAMATION		$1,482,869.05	(1,488,966.31)
AREA 10 - ROCK TUNNEL ROAD	5.00	$22,220.92	(22,606.03)
AREA 11 - EXPLORATION ROAD	2.40	$13,038.80	(13,845.10)
AREA 12 - OLD TRAM ROAD	2.20	$13,798.25	(14,831.49)
AREA 13 - BORROW PIT	7.30	$41,914.45	(41,874.38)
AREA 14 - UNIT TRAIN	8.00	$171,081.64	(171,532.58)
INTERIM SEDIMENT CONTROL		$51,350.00	
TOTAL AREAS 1 - 14 & INTERIM SEDIMENT CONTROL	173.20	$3,247,109.49	(3,258,544.30)

SUBTOTALS BY CATEGORY

DEMOLITION AND REMOVAL	$737,488.33	
EARTHWORK AND REMOVAL	$261,027.32	
TOPSOIL PREPARATION	$522,896.01	
REVEGETATION	$246,347.44	
PORTAL SEALS AND BACKFILL	$48,450.39	
CHANNEL RECLAMATION	$1,379,550.00	
INTERIM SEDIMENT CONTROL	$51,350.00	
TOTAL ALL CATEGORIES	$3,247,109.49	(3,258,544.30
20% CONTRACTOR OVERHEAD AND PROFIT	$649,421.90	(651,708.86)
10% MAINTENANCE AND MONITORING COSTS	$324,710.95	(325,854.43)
10% CONTINGENCY AND ENGINEERING COSTS	$324,710.95	(325,854.43)
SUBTOTAL IN 1989 DOLLARS	$4,545,953.28	(4,561,962.02)
SUBTOTAL WITH ESCALATION @ 1.81% X 1989 $ = 1990 $	$4,628,235.04	(4,644,533.53)
SUBTOTAL WITH ESCALATION @ 1.93%/YR FOR 2 YEARS = 1992 $	$4,808,608.88	(4,825,542.57
TOTAL BOND ESTIMATE ROUNDED TO THE NEAREST $1000 IN 1992 DOLLARS	$4,809,000.00	(4,826,000.00)

Figures in pencil were calculated using the hourly rates for a CAT 631 E and a CAT 235 shown at the top of page 1.

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EXHIBIT 36
TABLE A
BOND CALCULATION BY AREA

DESCRIPTION	MATERIALS	ACRES	QUANTITY	UNITS	COST	/UNITS	AMOUNT
AREA 1 - LOWER OPERATIONS							
EQUIPMENT (NO SALVAGE VALUE ALLOWED)			1800.00	TONS	$142.00	/TONS	$255,600.00
STRUCTURES							
OLD SHOP BUILDING	MIX		36458.00	FT3	$0.17	/FT3	$6,197.86
NEW SHOP BUILDING	MIX		36450.00	FT3	$0.17	/FT3	$6,196.50
EQUIPMENT STORAGE BUILDING	MIX		43087.00	FT3	$0.17	/FT3	$7,324.79
WAREHOUSE BUILDING	CONC		12500.00	FT3	$0.22	/FT3	$2,750.00
OFFICE BUILDING	MIX		18750.00	FT3	$0.17	/FT3	$3,187.50
SECURITY GUARD RESIDENCE	MIX		3840.00	FT3	$0.17	/FT3	$652.80
SNOW PLOW GARAGE	MIX		2880.00	FT3	$0.17	/FT3	$489.60
BATH HOUSE	MIX		10000.00	FT3	$0.17	/FT3	$1,700.00
PREPARATION PLANT & CRUSHER BUILDING	STEEL		168000.00	FT3	$0.16	/FT3	$26,880.00
SCREENING BUILDING	STEEL		25500.00	FT3	$0.16	/FT3	$4,080.00
COAL WASTE BIN (REFUSE)	STEEL		6667.00	FT3	$0.16	/FT3	$1,066.72
STOKER COAL BIN	STEEL		1120.00	FT3	$0.16	/FT3	$179.20
SUBSTATIONS 2ea.	MIX		6000.00	FT3	$0.17	/FT3	$1,020.00
CHAIN LINK FENCE	FENCING		800.00	LF	$1.22	/LF	$976.00
MOTOR CONTROL BUILDING	CONC		600.00	FT3	$0.22	/FT3	$132.00
RAW COAL STACKING TUBE	CONC		22267.00	FT3	$0.22	/FT3	$4,898.74
& CONVEYOR	STEEL		10000.00	FT3	$0.16	/FT3	$1,600.00
CLEAN COAL STACKING	CONC		22267.00	FT3	$0.22	/FT3	$4,898.74
TUBE & CONVEYOR	STEEL		16000.00	FT3	$0.16	/FT3	$2,560.00
DIESEL FUEL STORAGE & DISPENSING	STEEL		2048.00	FT3	$0.16	/FT3	$327.68
GASOLINE FUEL STORAGE & DISPENSING	STEEL		4320.00	FT3	$0.16	/FT3	$691.20
CONVEYORS - 4500FT	STEEL		170000.00	FT3	$0.16	/FT3	$27,200.00
SAMPLE BUILDING	STEEL		15530.00	FT3	$0.16	/FT3	$2,484.80
POWER LINES	WOOD/WIRE		13500.00	LF	$3.62	/LF	$48,870.00
TIPPLE FOUNDATION	CONC		90000.00	FT3	$0.22	/FT3	$19,800.00
RECLAIM TUNNELS	MIX		24000.00	FT3	$0.17	/FT3	$4,080.00
RAILROAD TRACKS	MIX		8750.00	LF	$3.25	/LF	$28,437.50
CONCRETE RESERVOIR	BACKFILL		1730.00	YD3	$2.50	/YD3	$4,325.00
HEADHOUSE	MIX		266.00	FT3	$0.17	/FT3	$45.22
SUBTOTAL DEMOLITION AND REMOVAL							$468,651.85

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EXHIBIT 36
TABLE A
BOND CALCULATION BY AREA

DESCRIPTION	MATERIALS	ACRES	QUANTITY	UNITS	COST	/UNITS	AMOUNT
AREA 1 (CONTINUED)							
							should be $183.22 per hour
EARTHWORK AND PLANTING							
OPERATIONS AREA							
RIPPING	DEERE 410C	33.40	1.00	AC/HR	$53.04	/HR	$1,771.54
TOPSOIL SPREADING	CAT631E	30.00	76472.00	YD3 @	(182.92)		(105,971.65)
			132.00	YD3/HR	$183.22	/YD3	$106,145.45
SOIL ADDITIVES	FERTILIZER	33.40	100.00	LB/AC	$0.11	/LB	$367.40
	TRACTOR & SPREADER	33.40	3.00	AC/HR	$57.00	/HR	$634.60
DRILL SEEDING	TRACTOR & DRILL	22.00	3.00	AC/HR	$57.00	/HR	$418.00
	SEED	22.00	1.00	LS ?	$285.95	/AC	$6,290.90
HYDROSEEDING	HYDROSEED	11.40	1.00	LS	$927.36	/AC	$10,571.90
	MULCH	11.40	2000.00	LB/AC	$1,200.00	/AC	$13,680.00
	SEED	11.40	1.00	LS	$285.95	/AC	$3,259.83
SEEDLINGS	SEEDLINGS	33.40	600.00	/AC	$1.50	/EA	$30,060.00
REFUSE PILE AREA							
PRE-RECLAMATION REFUSE SAMPLES			420	EA	$83.12	/EA	$34,910.40
MIXING HOT SPOTS	TRACTOR & PLOW	29.00	1.00	AC/HR	$60.00	/HR	$1,740.00
TOPSOIL SPREADING	CAT631E	87.20	222279.00	YD3 @	(182.92)		(308,024.81)
			132.00	YD3/HR	$183.22	/HR	$308,529.99
SOIL ADDITIVES	FERTILIZER	87.20	100.00	LB/AC	$0.11	/LB	$959.20
	TRACTOR & SPREADER	87.20	3.00	AC/HR	$57.00	/HR	$1,656.80
DRILL SEEDING	TRACTOR & DRILL	87.20	3.00	AC/HR	$57.00	/HR	$1,656.80
	SEED	87.20	1.00	LS	$285.95	/AC	$24,934.84
SEEDLINGS IN CLUMPS	SEEDLINGS		1336.00	LS	$1.50	/EA	$2,004.00
ROADS - UNPAVED							
EXCAVATING	CAT235	1.60	2587.00	YD3 @	(104.34)		(2,076.37) see page 1
			130.00	YD3/HR	*$90.00	/HR	$1,791.00
HYDROSEEDING	HYDROSEED	1.60	1.00	LS	$927.36	/AC	$1,483.78
	SEED	1.60	1.00	LS	$285.95	/AC	$457.52
	MULCH	1.60	2000.00	LB/AC	$1,200.00	/AC	$1,920.00
SEEDLINGS	SEEDLINGS	1.60	600.00	/AC	$1.50	/EA	$1,440.00
SEDIMENT PONDS							
BACKFILL	CATD8	2.80	6400.00	YD3 @			
			92.00	YD3/HR	$125.11	/HR	$8,703.30
TOPSOIL SPREADING	CAT631E	2.80	6206.00	YD3 @	(182.92)		~~(8,600.01)~~ see page 1
			132.00	YD3/HR	*$183.22	/HR	$8,614.12
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDING	2.80	100.00	LB/AC	$0.11	/LB	$30.80
HYDROSEEDING	HYDROSEED	2.80	1.00	LS	$927.36	/AC	$2,596.61
	SEED	2.80	1.00	LS	$285.95	/AC	$800.66
	MULCH	2.80	2000.00	LB/AC	$1,200.00	/AC	$3,360.00
SEEDLINGS	SEEDLINGS	2.80	600.00	/AC	$1.50	/EA	$2,520.00
SUBTOTAL EARTHWORK AND PLANTING							$583,309.44 (582,901.72)
TOTAL AREA 1							$1,051,961.29 (1,051,553.57)

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EXHIBIT 36
TABLE A
BOND CALCULATION BY AREA

DESCRIPTION	MATERIALS	ACRES	QUANTITY	UNITS	COST	/UNITS	AMOUNT
AREA 2 - NO. 1 MINE AREA							
EQUIPMENT			250.00	TONS	$142.00	/TON	$35,500.00
(NO SALVAGE VALUE ALLOWED)							
STRUCTURES							
SHOP	MIX		6000.00	FT3	$0.17	/FT3	$1,020.00
FAN	MIX		2000.00	FT3	$0.17	/FT3	$340.00
LOADING RAMP	CONC		500.00	FT3	$0.22	/FT3	$110.00
SUBSTATION	MIX		600.00	FT3	$0.17	/FT3	$102.00
CHAIN LINK FENCE	FENCING		120.00	LF	$1.22	/LF	$146.40
TRUCK LOADOUT	STEEL		5400.00	FT3	$0.16	/FT3	$864.00
POWER LINES	WOOD/WIRE		1100.00	LF	$3.62	/LF	$3,982.00
SUBTOTAL DEMOLITION AND REMOVAL							$42,064.40
EARTHWORK AND PLANTING							
PORTAL AREA							
PORTAL SEALS & BACKFILL							
SEALS	BLOCK		7	EA	$2,000.00	/EA	$14,000.00
BACKFILL	EIMCO915		1297.00	YD3 @			
			80.00	YD3/HR	$85.77	/HR	$1,390.55
EXCAVATION	CAT235	2.90	15600.00	YD3 @	(104.34)		(12,520.80)
			130.00	YD3/HR	$90.00	/HR	$10,800.00
TOPSOIL SPREADING	CATD8	2.90	3510.00	YD3 @			
			92.00	YD3/HR	$125.11	/HR	$4,773.22
	CAT235	2.90	2000.00	YD3 @	(104.34)		(1,605.23)
			130.00	YD3/HR	$90.00	/HR	$1,384.62
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	2.90	100.00	LB/AC	$0.11	/LB	$31.90
HYDROSEEDING	HYDROSEED	2.90	1.00	LS	$927.36	/AC	$2,689.34
	SEED	2.90	1.00	LS	$285.95	/AC	$829.26
	MULCH	2.90	2000.00	LB/AC	$1,200.00	/AC	$3,480.00
SEEDLINGS	SEEDLINGS	2.90	600.00	/AC	$1.50	/EA	$2,610.00
ROADS							
EXCAVATION	CAT235	1.30	2500.00	YD3 @	(104.34)		(1,976.14)
			132.00	YD3/HR	$90.00	/HR	$1,704.55
HYDROSEEDING	HYDROSEED	1.30	1.00	LS	$927.36	/AC	$1,205.57
	SEED	1.30	1.00	LS	$285.95	/AC	$371.74
	MULCH	1.30	2000.00	LB/AC	$1,200.00	/AC	$1,560.00
SEEDLINGS	SEEDLINGS	1.30	600.00	/AC	$1.50	/AC	$1,170.00
COAL LOADOUT AREA							
ASPHALT REMOVAL	ASPHALT	1.00	14520.00	FT2	$1.67	/FT2	$24,248.40
GRADING	CAT14G	2.00	3233.00	YD3 @			
			1083.00	YD3/HR	$88.49	/HR	$264.16
TOPSOIL SPREADING	CAT631E	2.00	4433.00	YD3 @	(182.92)		
			132.00	YD3/HR	$183.22	/HR	$6,153.14 (6,143.06)

Should be $1.50/EA

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DESCRIPTION	MATERIALS	ACRES	QUANTITY	UNITS	COST	/UNITS	AMOUNT
AREA 2 (CONTINUED)							
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	2.00	100.00	LB/AC	$0.11	/LB	$22.00
HYDROSEEDING	HYDROSEED	2.00	1.00	LS	$927.36	/AC	$1,854.72
	SEED	2.00	1.00	LS	$285.95	/AC	$571.90
	MULCH	2.00	2000.00	AC	$1,200.00	/AC	$2,400.00
SEEDLINGS	SEEDLINGS	2.00	600.00	/AC	$1.50	/EA	$1,800.00
SEDIMENT POND							
BACKFILLING	CATD8	0.60	1250.00	YD3 @			
			92.00	YD3/HR	$125.11	/HR	$1,699.86
TOPSOIL SPREADING	CATD8	0.60	1250.00	YD3 @			
			92.00	YD3/HR	$125.11	/HR	$1,699.86
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	0.60	100.00	LB/AC	$0.11	/LB	$6.60
HYDROSEEDING	HYDROSEED	0.60	1.00	LS	$927.36	/AC	$556.42
	SEED	0.60	1.00	LS	$285.95	/AC	$171.57
	MULCH	0.60	2000.00	LB/AC	$1,200.00	/AC	$720.00
SEEDLINGS	SEEDLINGS	0.60	600.00	/AC	$1.50	/EA	$540.00
SUBTOTAL EARTHWORK AND PLANTING							$90,709.36 (92,912.28)
TOTAL AREA 2							$132,773.76 (134,976.68
AREA 3 - NO. 2 MINE AREA							
EQUIPMENT (NO SALVAGE VALUE ALLOWED)	MIX		10.00	TONS	$142.00	/YD3	$1,420.00
STRUCTURES							
PORTAL BUILDING	MIX		200.00	FT3	$0.17	/FT3	$34.00
POWER LINES	WOOD/WIRE		200.00	LF	$3.62	/LF	$724.00
SUBTOTAL DEMOLITION AND REMOVAL							$2,178.00
EARTHWORK AND PLANTING							
EXCAVATION	CAT235	2.20	4876.00	YD3 @			
			130.00	YD3/HR	(104.34) $90.00	/HR	(3,913.55) $3,375.69
TOPSOIL SPREADING	CATD8	2.20	4876.00	@			
			130.00	YD3/HR	$125.11	/HR	$4,692.59
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	2.20	100.00	LB/AC	$0.11	/LB	$24.20
HYDROSEEDING	HYDROSEED	2.20	1.00	LS	$927.36	/AC	$2,040.19
	SEED	2.20	1.00	LS	$285.95	/AC	$629.09
	MULCH	2.20	2000.00	LB/AC	$1,200.00	/AC	$2,640.00
SEEDLINGS	SEEDLINGS	2.20	600.00	/AC	$1.50	/EA	$1,980.00

Should be 2000.00/AC

Stuff is 1 ton per YD³?

Should be 4876.00YD³

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DESCRIPTION	MATERIALS	ACRES	QUANTITY	UNITS	COST	/UNITS	AMOUNT
AREA 3 (CONTINUED)							
ROADS							
EXCAVATION	CAT235	0.40	1055.00	YD3 @	(104.34)		(833.93)
			132.00	YD3/HR	$125.11	/HR	$999.93
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	0.40	100.00	LB/AC	$0.11	/LB	$4.40
HYDROSEEDING	HYDROSEED	0.40	1.00	LS	$927.36	/AC	$370.94
	SEED	0.40	1.00	LS	$285.95	/AC	$114.38
	MULCH	0.40	2000.00	LB/AC	$1,200.00	/AC	$480.00
SEEDLINGS	SEEDLINGS	0.40	600.00	AC	$1.50	/EA	$360.00
SUBTOTAL EARTHWORK AND PLANTING							$17,711.42 (18,083.28)
TOTAL AREA 3							$19,889.42 (20,261.28)
AREA 4 - LION PORTAL AREA							
EQUIPMENT (NO SALVAGE VALUE ALLOWED)	MIX		40.00	TONS	$142.00	/TON	$5,680.00
STRUCTURES							
SHOP BUILDING	CONC		54000.00	FT3	$0.22	/FT3	$11,880.00
BATHHOUSE/OFFICE BUILD	CONC		36000.00	YD3	$0.22	/YD3	$7,920.00
WAREHOUSE	MIX		5866.00	YD3	$0.17	/YD3	$997.22
OIL STORAGE BUILDING	MIX		2000.00	YD3	$0.17	/YD3	$340.00
SUBSTATION	MIX		1500.00	YD3	$0.17	/YD3	$255.00
	CHAIN LINK FENCE		400.00	LF	$1.22	/LF	$488.00
POWER LINES	WOOD/WIRE		300.00	LF	$3.62	/LF	$1,086.00
SUBTOTAL DEMOLITION AND REMOVAL							$28,646.22
EARTHWORK AND PLANTING							
OPERATIONS AREA							
EXCAVATION							
PORTAL SEALS & BACKFILL							
SEALS	BLOCK		4	EA	$2,000.00	/EA	$8,000.00
BACKFILL	EIMCO915		900.00	YD3 @			
			80.00	YD3/HR	$85.77	/HR	$964.91
EXCAVATION	CAT235	8.60	19062.00	YD3 @	(104.34)		(15,299.45)
			130.00	YD3/HR	$90.00	/HR	$13,196.77
TOPSOIL SPREADING	CATD8	8.60	10406.00	YD3 @			
			92.00	YD3/HR	$125.11	/HR	$14,151.03
	CAT235	8.60	5260.00	YD3 @	(104.34)		(4,221.76)
			130.00	YD3/HR	$90.00	/HR	$3,641.54
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	8.60	100.00	LB/AC	$0.11	/LB	$94.60
HYDROSEEDING	HYDROSEED	8.60	1.00	LS	$927.36	/AC	$7,975.30
	SEED	8.60	1.00	LS	$285.95	/AC	$2,459.17
	MULCH	8.60	2000.00	LB/AC	$1,200.00	/AC	$10,320.00
SEEDLINGS	SEEDLINGS	8.60	250.00	AC	$1.50	/EA	$3,225.00

Should be 600.00/AC

Should be 250.00/AC

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DESCRIPTION	MATERIALS	ACRES	QUANTITY	UNITS	COST /UNITS	AMOUNT
AREA 4 (CONTINUED)						
STOPE HOLE BACKFILL	CONC/ROCK		15271.00	YD3	$1.00 /YD3	$15,271.00
CONCRETE CAP SEAL	CONC		150.00	YD3	$60.00 /YD3	$9,000.00
TREATMENT FACILITY 1 AREA						
PORTAL SEALS & BACKFILL						
SEALS	BLOCK		1	EA	$2,000.00 /EA	$2,000.00
BACKFILL	EIMCO915		177.00	YD3 @		
			80.00	YD3/HR	$85.77 /HR	$189.77
EXCAVATION	CAT235	0.20	1346.00	YD3 @	(104.34)	(1080.32)
			130.00	YD3/HR	$90.00 /HR	$931.85
TOPSOIL SPREADING	CATD8	0.20	245.00	YD3 @		
			92.00	YD3/HR	$125.11 /HR	$333.17
	CAT235	0.20	125.00	YD3	(104.34)	(100.33)
			130.00	YD3/HR	$90.00 /HR	$86.54
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	0.20	100.00	LB/AC	$0.11 /LB	$2.20
HYDROSEEDING	HYDROSEED	0.20	1.00	LS	$927.36 /AC	$185.47
	SEED	0.20	1.00	LS	$285.95 /AC	$57.19
	MULCH	0.20	2000.00	LB/AC	$1,200.00 /AC	$240.00
SEEDLINGS	SEEDLINGS	0.20	250.00	AC	$1.50 /EA	$75.00
SUBTOTAL EARTHWORK AND PLANTING					(95,245.66)	$92,400.50
TOTAL AREA 4						$121,046.72 (123,891.88)
AREA 5 - MUDWATER CANYON FAN AREA						
EQUIPMENT (NO SALVAGE VALUE ALLOWED)	MIX		10.00	TONS	$142.00 /TON	$1,420.00
STRUCTURES						
POWER LINES	WOOD/WIRE		3600.00	LF	$4.16 /LF	$14,976.00
SUBTOTAL DEMOLITION AND REMOVAL						$16,396.00
EARTHWORK AND PLANTING						
PORTAL SEALS & BACKFILL						
SEALS	BLOCK		7	EA	$2,000.00 /EA	$14,000.00
BACKFILL	EIMCO915		1244.00	YD3 @		
			80.00	YD3/HR	$85.77 /HR	$1,333.72
EXCAVATION	CATD3	1.70	3768.00	YD3 @		
			15.00	YD3/HR	$45.00 /HR	$11,304.00
TOPSOIL SPREADING	CATD3	1.70	2057.00	YD3 @		
			15.00	YD3/HR	$45.00 /HR	$6,171.00
SOIL ADDITIVES	FERTILIZER	1.70	100.00	LB/AC	$0.11 /LB	$18.70
SEEDING	SEED	1.70	1.00	LS	$285.95 /AC	$486.11
	MULCH	1.70	2000.00	LB/AC	$1,200.00 /AC	$2,040.00
	HAND SEEDING	1.70	1.00	LS	$1,378.20 /AC	$2,342.94

Should be 250.00 /AC

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EXHIBIT 36
TABLE A
BOND CALCULATION BY AREA

Should be 250.00/AC

DESCRIPTION	MATERIALS	ACRES	QUANTITY UNITS	COST /UNITS	AMOUNT
AREA 5 (CONTINUED)					
SEEDLINGS	SEEDLINGS	1.70	250.00 AC	$1.50 /EA	$637.50
SUBTOTAL EARTHWORK AND PLANTING					$38,333.98
TOTAL AREA 5					$54,729.98
AREA 6 - CORNER CANYON FAN AREA					
EQUIPMENT (NO SALVAGE VALUE ALLOWED)	STEEL		12.00 TONS	$142.00 /TON	$1,704.00
STRUCTURES					
FENCE	WIRE/POSTS		1000.00 LF	$1.22 /LF	$1,220.00
SUBTOTAL DEMOLITION AND REMOVAL					$2,924.00
EARTHWORK AND PLANTING					
BACKFILLING	EIMCO915	0.40	2216.00 YD3 @		
			30.00 YD3/HR	$139.03 /HR	$10,269.68
PORTAL SEALS & BACKFILL					
SEALS	BLOCK		3 EA	$2,000.00 /EA	$6,000.00
BACKFILL CUTS	EIMCO915		533.00 YD3 @		
			80.00 YD3/HR	$85.77 /HR	$571.44
TOPSOIL SPREADING	CATD3	0.40	325.00 YD3 @		
			15.00 YD3/HR	$45.00 /HR	$975.00
SOIL ADDITIVES	FERTILIZER	0.40	100.00 LB/AC	$0.11 /LB	$4.40
SEEDING	SEED	0.40	1.00 LS	$285.95 /AC	$114.38
	MULCH	0.40	2000.00 LB/AC	$1,200.00 /AC	$480.00
	HAND SEEDING	0.40	1.00 LS	$1,378.20 /AC	$551.28
SEEDLINGS	SEEDLINGS	0.40	350.00 EA	$1.50 /EA	$525.00
SUBTOTAL EARTHWORK AND PLANTING					$19,491.19
TOTAL AREA 6					$22,415.19
AREA 7 - COUNTY ROAD	TO BE LEFT FOR POST MINE LAND USE				
EQUIPMENT					
CONVEYORS - 2650FT	STEEL		100111.00 FT3	$0.16 /FT3	$16,017.76
POWER LINES - 2650FT	WOOD/SIRE		2650.00 LF	$3.62 /LF	$9,593.00
TOTAL AREA 7					$25,610.76

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EXHIBIT 36
TABLE A
BOND CALCULATION BY AREA

DESCRIPTION	MATERIALS	ACRES	QUANTITY UNITS	COST /UNITS	AMOUNT
AREA 8 - ROAD TO NO. 1 MINE ROADS					
EXCAVATION	CAT235	2.50	14888.00 YD3 @	(104.34)	(11,768.29)
			132.00 YD3/HR	$125.00 /HR	$14,098.48
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	2.50	100.00 LB/AC	$0.11 /LB	$27.50
HYDROSEEDING	HYDROSEED	2.50	1.00 LS	$927.36 /AC	$2,318.40
	SEED	2.50	1.00 LS	$285.95 /AC	$714.88
	MULCH	2.50	2000.00 LB/AC	$1,200.00 /AC	$3,000.00
SEEDLINGS	SEEDLINGS	2.50	600.00 /AC	$1.50 /EA	$2,250.00
TOTAL AREA 8					$22,409.26 (20,079.07)
AREA 9 - FINAL CHANNEL RECLAMATION					
EARTHWORK					
EXCAVATE REFUSE PILE	CATD9		72013.00 YD3 @		
			150.00 YD3/HR	$135.50 /HR	$65,051.74
EXCAVATE CHANNELS	CAT235		55275.00 YD3 @	(104.34)	(44,364.57)
			130.00 YD3/HR	$90.00 /HR	$38,267.31
FILTER BLANKET MATERIAL	GRAVEL		20839.00 YD3	$25.00 /YD3	$520,975.00
RIPRAP MATERIAL	ROCK		34343.00 YD3	$25.00 /YD3	$858,575.00
TOTAL AREA 9					$1,482,869.05 (1,488,966.31)
AREA 10 - ROCK TUNNEL ROAD					
STRUCTURES					
POWER LINE	WOOD/WIRE		1430.00 LF	$3.62 /LF	$5,176.60
CONVEYOR	STEEL		54022.00 FT3	$0.16 /FT3	$8,643.52
SUBTOTAL DEMOLITION AND REMOVAL					$13,820.12
EARTHWORK AND PLANTING					
ROADS					
EXCAVATION	CAT235	1.80	3545.00 YD3 @	(104.34)	(2,802.16)
			132.00 YD3/HR	$90.00 /HR	$2,417.05
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	1.80	100.00 LB/AC	$0.11 /LB	$19.80
HYDROSEEDING	HYDROSEED	1.80	1.00 LS	$927.36 /AC	$1,669.25
	SEED	1.80	1.00 LS	$285.95 /AC	$514.71
	MULCH	1.80	2000.00 LB/AC	$1,200.00 /AC	$2,160.00
SEEDLINGS	SEEDLINGS	1.80	600.00 /AC	$1.50 /EA	$1,620.00
SUBTOTAL EARTHWORK AND PLANTING					$8,400.80 (8,785.91)
TOTAL AREA 10					$22,220.92 (22,606.03)

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EXHIBIT 36
TABLE A
BOND CALCULATION BY AREA

DESCRIPTION	MATERIALS	ACRES	QUANTITY	UNITS	COST	/UNITS	AMOUNT
AREA 11 - EXPLORATION ROAD							
EXCAVATION	CAT235	2.40	7422.00	YD3 @	(104.34)		(5,866.75)
			132.00	YD3/HR	$90.00	/HR	$5,060.45
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	2.40	100.00	LB/AC	$0.11	/LB	$26.40
HYDROSEEDING	HYDROSEED	2.40	1.00	LS	$927.36	/AC	$2,225.66
	SEED	2.40	1.00	LS	$285.95	/AC	$686.28
	MULCH	2.40	2000.00	LB/AC	$1,200.00	/AC	$2,880.00
SEEDLINGS	SEEDLINGS	2.40	600.00	/AC	$1.50	/EA	$2,160.00
TOTAL AREA 11							$13,038.80 (13,845.10)
AREA 12 - OLD TRAM ROAD							
EXCAVATION	CAT235	2.20	9511.00	YD3 @	(104.34)		(7,518.01)
			132.00	YD3/HR	$90.00	/HR	$6,484.77
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	2.20	100.00	LB/AC	$0.11	/LB	$24.20
HYDROSEEDING	HYDROSEED	2.20	1.00	LS	$927.36	/AC	$2,040.19
	SEED	2.20	1.00	LS	$285.95	/AC	$629.09
	MULCH	2.20	2000.00	LB/AC	$1,200.00	/AC	$2,640.00
SEEDLINGS	SEEDLINGS	2.20	600.00	/AC	$1.50	/EA	$1,980.00
TOTAL AREA 12							$13,798.25 (14,831.49)
AREA 13 - BORROW PIT AREA - INCLUDES SEDIMENT POND 2							
EXCAVATION	CATD8	7.30	2222.00	YD3 @			
			92.00	/YD3/HR	$125.11	/HR	$3,021.68
TOPSOIL SPREADING	CAT631E	7.30	8833.00	YD3 @	(182.92)		(12,240.40)
			132.00	YD3/HR	$183.22	/YD3	$12,260.47
SOIL ADDITIVES	FERTILIZER	7.30	100.00	LB/AC	$0.11	/LB	$80.30
	TRACTOR & SPREADER	7.30	3.00	AC/HR	$57.00	/HR	$138.70
DRILL SEEDING	TRACTOR & DRILL	7.30	3.00	AC/HR	$57.00	/HR	$138.70
	SEED	7.30	1.00	LS	$285.95	/AC	$2,087.44
HYDROSEEDING	HYDROSEED	7.30	1.00	LS	$927.36	/AC	$6,769.73
	MULCH	7.30	2000.00	LB/AC	$1,200.00	/AC	$8,760.00
	SEED	7.30	1.00	LS	$285.95	/AC	$2,087.44
SEEDLINGS	SEEDLINGS	7.30	600.00	/AC	$1.50	/EA	$6,570.00
TOTAL AREA 13							$41,914.45 (41,894.38)

DESCRIPTION	MATERIALS	ACRES	QUANTITY UNITS	COST /UNITS	AMOUNT
AREA 14 - UNIT TRAIN AREA					
EQUIPMENT (NO SALVAGE VALUE ALLOWED)	STEEL		305.00 TONS	$142.00 /TON	$43,310.00
STRUCTURES					
CONVEYORS - 2030 FT	STEEL		76689.00 FT3	$0.16 /FT3	$12,270.24
SILO	CONC		341367.00 FT3	$0.22 /FT3	$75,100.74
POWER LINES	WOOD/WIRE		1800.00 LF	$3.62 /LF	$6,516.00
SUBTOTAL DEMOLITION AND REMOVAL					$137,196.98
EARHTWORK					
EXCAVATION - INCLUDING SED. POND 8	CATD8	4.80	7541.00 YD3 @ 92.00 YD3/HR	$125.11 /HR	$10,254.94
ROAD TO BELT TRANSFER	CAT235	4.80	4088.00 YD3 @ 130.00 YD3/HR	($104.34) $90.00 /HR	($3,281.09) $2,830.15
TOPSOIL SPREADING	CAT988B CATD8	4.80	4598.00 YD3 @ 132.00 YD3/HR	$139.03 /YD3	$4,842.88
SOIL ADDITIVES	FERTILIZER WITH HYDROSEEDER	4.80	100.00 LB/AC	$0.11 /LB	$52.80
HYDROSEEDING	HYDROSEED	4.80	1.00 LS	$927.36 /AC	$4,451.33
	MULCH	4.80	2000.00 LB/AC	$1,200.00 /AC	$5,760.00
	SEED	4.80	1.00 LS	$285.95 /AC	$1,372.56
SEEDLINGS	SEEDLINGS	4.80	600.00 /AC	$1.50 /EA	$4,320.00
SUBTOTAL EARTHWORK					$33,884.66 (34,335.60)
TOTAL AREA 14					$171,081.64 (171,532.58)
INTERIM SEDIMENT CONTROL					
SILT FENCE (ALL AREAS)	SILT FENCE		15000.00 LF	$2.84 /LF	$42,600.00
STRAW BALES	STRAW		2500.00 EA	$3.50 /EA	$8,750.00
SUBTOTAL INTERIM SEDIMENT CONTROL					$51,350.00
GRAND TOTAL AREAS 1 THROUGH 14 AND INTERIM SEDIMENT CONTROL					$3,247,109.49

Should be $139.03/HR

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